

## ABSTRACT OF THE DISCLOSURE

A brushless dc motor includes a conversion circuit and a dc motor drive circuit. The conversion circuit includes a rectifier unit, a pulse-wave-absorbing unit, a filter unit, a voltage-stabilizing control unit and a voltage-stabilizing unit. The rectifier unit, the pulse-wave-absorbing unit and the filter unit are serially connected between an ac power source and the dc motor drive circuit. The ac power source is rectified, stabilized and filtered to thereby supply with a dc voltage to the dc motor drive circuit. The voltage-stabilizing control unit and the voltage-stabilizing unit are serially connected between the rectifier unit and the dc motor drive circuit so as to limit a passage of a high voltage and to allow a passage of a low voltage through the dc motor drive circuit. Thereby, the voltage-stabilizing control unit and the voltage-stabilizing unit are commonly in control of the operation of the dc motor drive circuit.